



## ADDENDUM ONE (1)

*project* Lake Superior Zoo - Black Bear Exhibit Renovation  
Duluth, Minnesota

*project #* 19001

*date* July 24, 2019

*from* Randy Wagner DSGW Architects, Inc.

*to* All planholders for above project

The following addendum shall become part of the construction documents for the construction of the above referenced project.  
This addendum supersedes and supplements all previous reference to similar items.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am duly a  
Licensed Architect under the laws of the State of Minnesota.

Signature

Registration # 21068

Date July 24, 2019

<i>specifications</i>	<b>SECTION</b>	<b>DESCRIPTION</b>
	<b>00 01 10</b>	<b>PROJECT MANUAL INDEX</b> 1. OMIT the following sections from under Division 07: 07 14 00 Fluid Applied Waterproofing 2. ADD the following section under Division 09, in numerical order: 09 22 16 Non-Structural Metal Framing
	<b>07 14 00</b>	<b>FLUID-APPLIED WATERPROOFING</b> 1. OMIT this section in its entirety.
	<b>07 84 00</b>	<b>FIRESTOPPING</b> 1. OMIT this section in its entirety.
	<b>08 80 00</b>	<b>GLAZING</b> 1. OMIT this section as originally issued and REPLACE with Section 08 80 00 – Glazing- Revised, as included with this addendum.
	<b>09 22 16</b>	<b>NON-STRUCTURAL METAL FRAMING</b> 1. ADD this section as included with this addendum.
	<b>13 15 00</b>	<b>WATER FEATURE</b> 1. ADD the following after 2.05: <b>2.06 Water Feature Mechanical Equipment</b> A. The existing mechanical water circulation pumps and associated equipment will be demolished. 1. The water feature configuration will be new to accommodate newly renovated Bear Exhibit space.

- B. Contractor shall provide, in conjunction with physical water feature, all plans drawings and product information on mechanical system for approval.
- C. Work is deemed administratively design-build.
- D. Scope of Work:
  - 1. The layout, extent and configuration are indicated on the drawings.
  - 2. The pool is intended to operate as a circulation system only. The pool will have the ability to be drained into the existing sanitary line for maintenance purposes. The new pump(s) and associated disconnect electrical panel will be located in the existing rockwork.
  - 3. The new system will be complete with all new piping, drains, valves, etc. necessary for an active waterfall and stream.
  - 4. The intent is to make use of the existing rockwork that becomes the source of the water feature and the top of the waterfall. The existing rockwork has a depressed pool that will need to be downsized to meet the new configuration. The new stream and ending pool will be newly constructed. It will be designed and constructed to look like a natural woodland stream and pool, complete with natural rocks, bottom aggregate and vegetation. The construction of the stream and pool will be reinforced shotcrete and embedded natural rock aggregate over a waterproofing membrane.
- E. Contractor Qualifications: Minimum 10 years experience working in the industry.

*Enclosures* - Spec. Section 08 80 00 – Glazing – Revised (3 pages)  
- Spec. Section 09 22 16 – Non-Structural Metal Framing (2 pages)

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This addendum shall become part of this bid. The bidder shall insert the addendum number in the space where indicated on the proposal form. Failure to comply may result in the bid being rejected.

END OF ADDENDUM ONE (1)

**SECTION 08 80 00**  
**GLAZING - REVISED**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Glass.
- B. Glazing compounds and accessories.
- C. Glass Engineering Analysis for Black Bear Exhibit as appended to this section.

**1.02 RELATED REQUIREMENTS**

- A. Section 08 11 13 - Hollow Metal Doors and Frames: Glazed borrowed lites.
- B. Section 05 50 00 – Metal Fabrications: Glazing installed in heavy duty SS frames.
  - 1. Coordinate with Structural.

**1.03 REFERENCE STANDARDS**

- A. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005 (Reapproved 2011).
- B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2011.
- C. ASTM C1036 - Standard Specification for Flat Glass; 2011e1.
- D. ASTM C1048 - Standard Specification for Heat-Treated Flat Glass--Kind HS, Kind FT Coated and Uncoated Glass; 2012.
- E. ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass; 2009e1.
- F. GANA (GM) - GANA Glazing Manual; Glass Association of North America; 2009.
- G. GANA (SM) - GANA Sealant Manual; Glass Association of North America; 2008.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data on Glass Types: Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements.
- C. Product Data on Glazing Compounds: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify available colors.

**1.05 QUALITY ASSURANCE**

- A. Perform Work in accordance with GANA Glazing Manual and FGMA Sealant Manual for glazing installation methods.
- B. Glazing to be designed to meet requirements of a Zoo environment.
  - 1. Glazing should be heavy duty and prevent damage from all animals in a Zoo environment.

**1.06 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Sealed Insulating Glass Units: Provide a ten (10) year warranty to include coverage for seal failure, interpane dusting or misting, including replacement of failed units.

**PART 2 PRODUCTS**

**2.01 GLAZING TYPES**

**2.02 GLASS MATERIALS**

- A. Float Glass Manufacturers:
  - 1. AGC Flat Glass North America, Inc.: [www.na.agc-flatglass.com](http://www.na.agc-flatglass.com).
  - 2. Guardian Industries Corporation: [www.guardian.com](http://www.guardian.com).
  - 3. Old Castle Glass; [ggreg@midwestglassreps.com](mailto:ggreg@midwestglassreps.com) (612) 849-4493; Nancy Dysting – (800) 328-9749, Albertville, MN; Only glass, would use sister company to laminate.

4. PPG Industries, Inc.: [www.ppgideascales.com](http://www.ppgideascales.com).
  5. Visteon Glass Systems: [www.visteon.com/floatglass](http://www.visteon.com/floatglass).
  6. Viracon.
  7. Global Security Glazing; Katlyn Dickey (866) 412-6977 ext. 121; [kdickey@security-glazing.com](mailto:kdickey@security-glazing.com); Engineer – Bill Lingnell Consulting Services (972) 771-1600 [lingnell@swbell.net](mailto:lingnell@swbell.net); Insulgard (810) 844-0776.
  8. Schott; [www.us.schott.com](http://www.us.schott.com); Ursula Doughty, sales rep. (941) 831-2243 [ursula.doughty@us.schott.com](mailto:ursula.doughty@us.schott.com); Steve Miller – Glazier (215) 441-9101 [srmiller@procurveglass.com](mailto:srmiller@procurveglass.com).
  9. Substitutions: Refer to Section 01 60 00 - Product Requirements.
- B. Float Glass: All glazing is to be float glass unless otherwise indicated.
1. Annealed Type: ASTM C1036, Type I, transparent flat, Class 1 clear, Quality Q3 (glazing select).
  2. Heat-Strengthened and Fully Tempered Types: ASTM C1048.
  3. Thicknesses: As indicated; for exterior glazing comply with specified requirements for wind load and Zoo animal blunt force design regardless of specified thickness.
- C. Laminated Glass: Float glass laminated in accordance with ASTM C1172.
1. Plastic Interlayer: 0.060 inch thick, minimum.
- D. Safety Glass: Clear; fully tempered with horizontal tempering.
1. Comply with ASTM C 1048, Condition A uncoated, Type I, transparent flat, Class 1, Quality q3 glazing select.
  2. Comply with ANSI Z97.1.
  3. Glazing shall include extra clear and low iron properties for all glazing layers.
  4. Glazing shall include anti-fingerprint and cleanability for both exterior surfaces of assembly.
  5. Glazing shall include anti-reflective coating for both exterior surfaces of assembly.

## 2.03 GLAZING COMPOUNDS

- A. Manufacturers:
1. Dow Corning Corp: [www.dowcorning.com](http://www.dowcorning.com).
  2. GE Plastics: [www.geplastics.com](http://www.geplastics.com).
  3. Pecora Corporation: [www.pecora.com](http://www.pecora.com).
  4. Substitutions: Refer to Section 01 60 00 - Product Requirements.
- B. Silicone Sealant: Single component; neutral curing; capable of water immersion without loss of properties; non-bleeding, non-staining; ASTM C 920, Type S, Grade NS, Class 25, Uses M, A, and G; cured Shore A hardness of 15 to 25; color as selected.

## 2.04 GLAZING ACCESSORIES

- A. Manufacturers:
1. Norton Performance Plastics Corp.
  2. Pecora Corporation: [www.pecora.com](http://www.pecora.com).
  3. Tremco, Inc.: [www.tremcosealants.com](http://www.tremcosealants.com).
  4. Substitutions: Refer to Section 01 60 00 - Product Requirements.
- B. Setting Blocks: Neoprene, 80 to 90 Shore A durometer hardness, ASTM C864 Option I. Length of 0.1 inch for each square foot of glazing or minimum 4 inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area.
- C. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness, ASTM C 864 Option I. Minimum 3 inch long x one half the height of the glazing stop x thickness to suit application, self-adhesive on one face.
- D. Glazing Tape: Preformed butyl compound with integral resilient tube spacing device; 10 to 15 Shore A durometer hardness; coiled on release paper; black color.
- E. Glazing Gaskets: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option I.

- F. Glazing Clips: Manufacturer's standard type.
- G. Anti-Reflective Coating: Schott AMIRAN – anti-reflective glazing coating or approved equal.
  - 1. 1% luminous reflectance (monolithic glass pane).
  - 2. Durable coating.
  - 3. Perfectly suited for outdoor applications due to weather resistant coating clear and neutral.
  - 4. 99% UV protection for laminated glass with PVB foil several processing options.
- H. Anti-fingerprint coating: Schott DARO – anti-fingerprint glazing coating or approved equal.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that openings for glazing are correctly sized and within tolerance.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and ready to receive glazing.

### **3.02 PREPARATION**

- A. Clean contact surfaces with solvent and wipe dry.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Prime surfaces scheduled to receive sealant.
- D. Install sealant in accordance with manufacturer's instructions.

### **3.03 INSTALLATION - INTERIOR WET/DRY METHOD (TAPE AND SEALANT)**

- A. Cut glazing tape to length and install against permanent stops, projecting 1/16 inch (1.6 mm) above sight line.
- B. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners.
- C. Rest glazing on setting blocks and push against tape to ensure full contact at perimeter of pane or unit.
- D. Install removable stops, spacer shims inserted between glazing and applied stops at 24 inch intervals, 1/4 inch below sight line.
- E. Fill gaps between pane and applied stop with silicone type sealant to depth equal to bite on glazing, to uniform and level line.
- F. Trim protruding tape edge.

### **3.04 CLEANING**

- A. Remove glazing materials from finish surfaces.
- B. Remove labels after Work is complete.
- C. Clean glass and adjacent surfaces.

**END OF SECTION**

**SECTION 09 22 16**  
**NON-STRUCTURAL METAL FRAMING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Metal framing.
- B. Framing accessories.

**1.02 RELATED REQUIREMENTS**

- B. Section 07 42 13 – Metal Wall Panels.
- C. Section 07 90 05 – Joint Sealers.

**1.03 REFERENCE STANDARDS**

- A. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members; 2011a.
- B. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2011.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data describing framing member materials and finish, product criteria, load charts, and limitations.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Metal Framing, Connectors, and Accessories:
  - 1. Clarkwestern Dietrich Building Systems LLC: [www.clarkdeitrich.com](http://www.clarkdeitrich.com).
  - 2. Dietrich Metal Framing: [www.dietrichindustries.com](http://www.dietrichindustries.com).
  - 3. Marino: [www.marinoware.com](http://www.marinoware.com).
  - 4. Unimast.
  - 5. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Metal Framing Connectors and Accessories:
  - 1. Substitutions: See Section 01 60 00 - Product Requirements.

**2.02 FRAMING MATERIALS**

- A. Non-Loadbearing Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf (240 Pa).
  - 1. Studs: C shaped with flat or formed webs with knurled faces.
  - 2. Runners: U shaped, sized to match studs.
  - 3. Gauge: 20 Gauge.
- B. Tracks and Runners: Same material and thickness as studs, bent leg retainer notched to receive studs with provision for crimp locking to stud.

**2.03 FABRICATION**

- A. Fabricate assemblies of framed sections to sizes and profiles required.
- B. Fit, reinforce, and brace framing members to suit design requirements.

**PART 3 EXECUTION**

**3.01 INSTALLATION OF STUD FRAMING**

- A. Extend partition framing to structure where indicated and to ceiling in other locations.
- B. Align and secure top and bottom runners at 24 inches (600 mm) on center.
- C. Fit runners under and above openings; secure intermediate studs to same spacing as wall studs.

- D. Align stud web openings horizontally.
- E. Secure studs to tracks using crimping method. Do not weld.
- F. Fabricate corners using a minimum of three studs.
- G. Double stud at wall openings, door and window jambs, not more than 2 inches (50 mm) from each side of openings.
- H. Coordinate installation of bucks, anchors, and blocking with electrical, mechanical, and other work to be placed within or behind stud framing.

**END OF SECTION**